

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/006238

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C22B19/04 C22B19/34 C22B5/10 C22B5/12 C22B5/16  
C22B13/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C22B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HEARD R ET AL.: "Recycling of Zinc-Bearing Residues with the PRIMUS Process" IRON STEELMAKER I AND SM, vol. 30, no. 4, April 2003 (2003-04), pages 55-60, XP009020220 the whole document	1-12
A	ESNA-ASHARI M ET AL.: "SMELTING REACTOR FOR RECOVERING ZINC FROM INDUSTRIAL LOW ZINC BEARING RESIDUES" ERZMETALL, RIEDERER VERLAG GMBH. STUTTGART, DE, vol. 53, no. 6, 2000, pages 373-384, XP000959985 ISSN: 0044-2658 * Figure 1; pages 374-375 *	1-12

-/--

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

15 September 2004

Date of mailing of the international search report

23/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Bjoerk, P

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/006238

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98/36102 A (BUCKETT GRAHAM ALAN ;BUKA TECH PTY LTD (AU); FOUNTAIN CHRISTOPHER) 20 August 1998 (1998-08-20) * page 20, lines 13-29 *	6
A	----- DATABASE COMPENDEX 'Online! ENGINEERING INFORMATION, INC., NEW YORK, NY, US; DE SCHEPPER A: "Liquid-liquid extraction of germanium by LIX-63" XP002260042 Database accession no. EIX78110005759 abstract & CHLORIDE HYDROMETALL, INT SYMP, PROC, 26 September 1977 (1977-09-26), - 28 September 1977 (1977-09-28) pages 357-384, Brussels, Belgium	7
A	----- GB 2 094 772 A (SAMIM SOC AZIONARIA MINERO MET) 22 September 1982 (1982-09-22) * page 1; lines 78-97 *	1-12
A	----- US 6 379 421 B1 (GUERRA-REYES MARIA TERESA ET AL) 30 April 2002 (2002-04-30) * Figure 1; column 3, lines 34-56 *	1-12
A	----- US 4 415 540 A (WILKOMIRSKY IGOR A E ET AL) 15 November 1983 (1983-11-15) cited in the application the whole document	1-12

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/EP2004/006238

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9836102	A	20-08-1998	AU 5974398 A WO 9836102 A1 ZA 9801286 A	08-09-1998 20-08-1998 17-08-1999
GB 2094772	A	22-09-1982	IT 1137505 B BE 892470 A1 CS 235010 B2 DE 3207026 A1 DK 99782 A FR 2501723 A1 GR 75875 A1 IE 52611 B1 LU 83997 A1 NL 8201028 A SE 462978 B SE 8201569 A YU 54482 A1	10-09-1986 13-09-1982 16-04-1985 16-09-1982 14-09-1982 17-09-1982 02-08-1984 23-12-1987 22-02-1983 01-10-1982 24-09-1990 14-09-1982 20-03-1985
US 6379421	B1	30-04-2002	AU 3317600 A EP 1165845 A2 ES 2200665 A1 WO 0050649 A2	14-09-2000 02-01-2002 01-03-2004 31-08-2000
US 4415540	A	15-11-1983	CA 1121605 A1 AU 526363 B2 AU 4608479 A BE 876054 A1 DE 2914823 A1 FI 791433 A ,B, FR 2424962 A1 GB 2020261 A ,B IE 48112 B1 JP 1456140 C JP 54147102 A JP 63000494 B US 4317803 A US 4619814 A US 4224122 A ZA 7901583 A	13-04-1982 06-01-1983 08-11-1979 03-09-1979 15-11-1979 06-11-1979 30-11-1979 14-11-1979 03-10-1984 09-09-1988 17-11-1979 07-01-1988 02-03-1982 28-10-1986 23-09-1980 28-05-1980